



**Environmental
Protection Agency**

John R. Kasich, Governor
Mary Taylor, Lt. Governor
Scott J. Nally, Director

July 15, 2011

Re: Scioto
Sciotoville WWTP
2011 CEI
Correspondence (PWW)

Mr. Randy Nickles, Operator of Record
Sciotoville WWTP
5808 East Front Street
Sciotoville, Ohio 45662

Dear Mr. Nickles:

On June 6, 2011, I conducted a Compliance Evaluation Inspection at the Sciotoville WWTP located in Sciotoville, Ohio. Steve Wells, with this office, assisted me with the inspection. Randy Lewis, Chris Reed and you represented the City of Portsmouth and accompanied me during the inspection. The purpose of the inspection was to determine the City of Portsmouth's compliance with NPDES Permit Number 0PC00018*ED and the Ohio Water Pollution Control Act, Revised Code Chapter 6111.

As a result of the inspection and review of our files, I have the following comments:

1. There have been SSO events in the collection system during rain events. The City of Portsmouth has failed to report the SSO's. In the future, report all SSO events in accordance with Part II, Item O of your NPDES permit. Also, a study and corrective actions required to abate the SSO events in the collection system shall be conducted as soon as possible and the study submitted to the Ohio EPA Southeast District Office.
2. The flow measuring devices in the treatment plant are checked daily but haven't been calibrated on an annual basis. Part III, Item 3 of your NPDES permit requires you to maintain all systems in a good working order. Regular calibrations are a part of maintenance for the facilities. I discussed with Mr. Lewis and you procedures for acceptable calibrations. Your flow metering devices should be calibrated as soon as possible and the date and the name of the personnel performing the calibrations recorded and kept on file. Normally, calibrations are good for a period of one year.

3. The Sciotoville plant personnel only perform pH, Dissolved Oxygen and CL2 readings on a daily basis. The Sciotoville plant currently does not have a Standard Operating Procedure Manual or QA/QC Manual for the laboratory. I have enclosed excerpts from the Standard Methods for the tests that you perform at Sciotoville and a Standard Operating Procedure (SOP) for pH. This will assist you with assembling a manual for your laboratory. Included in the manual should be instructions for performance of the required tests, manufacturers calibration procedures for each of the pieces of test equipment used to perform the lab tests and the above documents that I have enclosed. Also, include bench sheets and any pertinent calculations used to perform the lab tests. This is included in Part III, Items 5 and 6 of your NPDES permit. The rest of the lab work is performed at the Portsmouth Wastewater Plant and the lab technician comes to the Sciotoville plant and removes the required samples on the days that sampling is performed.
4. There have been suspended solids violations within the last year. You informed me that the city has made an effort to waste solids more frequently and this has helped with the plant's performance and frequency of solids violations. Part III, Item 3 of your NPDES permit requires you to maintain all systems in a good working order.
5. The Sciotoville plant currently does not have a generator or alternative power source for power outages. Part III, Item 3 of your NPDES permit requires you to operate back-up or auxiliary units to maintain treatment at the facility. The City of Portsmouth must have an alternative power source available at the treatment plant.

Attached is a copy of the inspection report which indicates marginal evaluations of the following areas: Operations & Maintenance, Facility Site Review, Collection System, Flow Measurement, Laboratory, Effluent/Receiving Waters. I gave these ratings because of the deficiencies mentioned in the above comments. The City of Portsmouth should take the appropriate actions to return the facility to compliance with all terms and conditions of the NPDES permit.

Please respond to this letter by August 12, 2011.

The Ohio EPA strongly encourages pollution prevention as the preferred approach for waste management. The first priority of pollution prevention is to eliminate the generation of wastes and pollutants at the source (source reduction). For those wastes or pollutants that are generated, the second priority is to recycle or reuse them in an environmentally sound manner. You can benefit economically, help preserve the environment, and improve your public image by implementing pollution prevention

programs. For more information about pollution prevention, including fact sheets and U.S. EPA's Facility Pollution Prevention Guide, (EPA/600/R-92/088), you may contact the Ohio EPA Pollution Prevention Section at (614) 644-3469 or me for additional information.

Sincerely,



Scott Foster
Environmental Specialist 2
Division of Surface Water

SF/dh

Enclosure

- c: Richard Duncan, Portsmouth Wastewater Director
- c: Randy Lewis, Operator
- c: Dwight Altman, Sewer Maintenance Supervisor

NPDES Compliance Inspection Report

A. NATIONAL DATA SYSTEM CODING

Permit No.	NPDES No.	Date	Inspection Type	Inspector	Facility Type
0PC00018*ED	OH0027201	June 6, 2011	C	S	1

B. FACILITY DATA

Name & Location of Facility Inspected	Entry Time	Permit Effective Date
Sciotoville WWTP 5808 East Front Street Sciotoville, Ohio 45662	8:35 a.m.	June 1, 2007
	Exit Time	Permit Expiration Date
	10:15 a.m.	May 31, 2012

Name(s) & Title(s) of On-Site Representative(s)	Phone Number(s)
Randy Nickles, Operator of Record	740-776-2222
Name, Address, & Title of Responsible Official	Phone Number
Randy Nickles Operator of Record Sciotoville WWTP 5808 East Front Street Sciotoville, Ohio 45662	740-776-2222

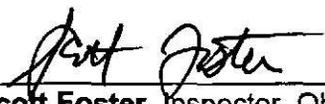
C. AREAS EVALUATED DURING INSPECTION

<u>S</u> Permit	<u>M</u> Flow Measurement	<u>N/A</u> Pretreatment
<u>S</u> Records/Reports	<u>M</u> Laboratory	<u>N/A</u> Compliance Schedules
<u>M</u> Operations & Maintenance	<u>M</u> Effluent/Receiving Waters	<u>S</u> Self-Monitoring Program
<u>M</u> Facility Site Review	<u>S</u> Sludge Storage/Disposal	<u>N/A</u> Other
<u>M</u> Collection System		

(S = Satisfactory; M = Marginal; U = Unsatisfactory; N = Not Evaluated; N/A = Not Applicable)

D. SUMMARY OF FINDINGS/COMMENTS (attach additional sheets if necessary)

See Attached Letter.



 Scott Foster, Inspector, Ohio EPA, Southeast District Office

7/15/11

 Date



 Timothy M. Campbell, Reviewer, Ohio EPA, Southeast District Office

7/15/11

 Date

E. PERMIT VERIFICATION

Inspection Observations Verify the Permit	YES	NO	N/A	N/E
a. Correct name & mailing address of permittee	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Correct name & location of receiving waters	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Product(s) & production rates conform with permit application (industries)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Flows & loadings conform with NPDES permit	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Treatment processes are as described in permit application/briefing memo	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f. New treatment process(es) added since last inspection	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g. Notification given to state of new, different, or increased discharges	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
h. All discharges are permitted	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
i. Number & location of discharge points are as described in permit	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Comments:

COMPLIANCE SCHEDULES/VIOLATIONS

	YES	NO	N/A	N/E
a. Any significant violations since the last inspection	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Permittee is taking actions to resolve violations	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Permittee has compliance schedule	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Compliance schedule contained in: _____	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e. Permittee is meeting compliance schedule	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Comments:

a. Suspended Solids Violations

G. OPERATION AND MAINTENANCE

Treatment Facility Properly Operated & Maintained	YES	NO	N/A	N/E
a. Standby power available: Generator: <input type="checkbox"/> Dual Feed: <input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Adequate alarm system available for power or equipment failures	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. All treatment units in service other than backup units	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Sufficient operating staff provided: # of shifts: <u>1</u> Days/Week: <u>7</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Operator holds unexpired license of class required by permit. Class: <u>III</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f. Copy of certificate of Operator of Record displayed on-site	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g. Minimum operator staffing requirements fulfilled (OAC 3745-7)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
h. Routine & preventive maintenance schedule/performed on time	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
i. Any major equipment breakdown since last inspection	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
j. Operation & maintenance manual provided & maintained	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
k. Any plant bypasses since last inspection	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
l. Regulatory agency notified of bypasses: On MORS: <input type="checkbox"/> 800 No.: <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
m. Any hydraulic and/or organic overloads experienced since last inspection	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Comments:

f. and g.- Operator rules do not apply until permit renews.

i. Sludge collectors broke, repaired in-house. m. Suspended Solids violations. Wasting solids more frequently to correct problem.

Record Keeping	YES	NO	N/A	N/E
a. Log book provided	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Log book kept on-site	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Log book contains the following:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
1. Identification of treatment works	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2. Date/Time of arrival/departure of ORC	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3. Daily record of operation and maintenance activities	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4. Laboratory results (unless documented on bench sheets)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
5. Identification of person making log entries	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. Is the ORC submitting written notification to Ohio EPA and permittee when a collection system overflow, treatment plant bypass or effluent limit violation has occurred.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Comments:

c and d not effective until permit renewal May of 2012.

Collection System	YES	NO	N/A	N/E
a. Percent combined system. Percent: <u>0</u>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Any collection system overflows since last inspection: CSO: <input type="checkbox"/> SSO: <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Regulatory agency notified of overflow (SSOs)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. CSO O&M plan provided and implemented	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e. CSOs monitored and reported in accordance with permit	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f. Portable pumps used to relieve system	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g. Lift station alarm systems provided and maintained	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
h. Are lift stations equipped with permanent standby power or equivalent	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
i. Is there an inflow/infiltration problem (separate sewer system), or were there any major repairs to collection system since last inspection	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
j. Any complaints received since last inspection of basement flooding	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
k. Are any portions of the sewer system at or near capacity	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Comments:

b. Manholes at Scioto Shoe Mart, Kiff Street. City informed that they should be reporting events.
g. Installation of telemetry system in planning phases. Auto dialers on Kiff, Harding P.S.

H. SLUDGE MANAGEMENT

	YES	NO	N/A	N/E
a. Sludge adequately disposed. Method: <u>Landfill</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. If sludge is incinerated, where is ash disposed of? _____	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Is sludge disposal contracted? Name: <u>Pike Sanitation</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Has amount of sludge generated changed significantly since last inspection	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Adequate sludge storage provided at facility	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f. Land application sites monitored and inspected per state rules	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g. Records kept in accordance with state rules	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
h. Any complaints received in last year regarding sludge	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
i. Is sludge adequately processed (digestion, dewatering, pathogen control) in	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

accordance with Ohio EPA rules				
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Comments:

d. Removing solids more frequently. g. Records kept at Portsmouth plant and requested they be kept onsite at Sciotoville for the Sciotoville plant.

I. SELF-MONITORING PROGRAM

Part 1 - Flow Measurement	YES	NO	N/A	N/E
a. Primary flow measuring device properly operated & maintained. Type of device: <input checked="" type="checkbox"/> Ultrasonic & parshall flume <input type="checkbox"/> Calculated from influent <input type="checkbox"/> Weir <input type="checkbox"/> Other <input type="checkbox"/> Ultrasonic & weir specify: _____	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Calibration frequency adequate. Date of last calibration: <u>Unknown</u>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Secondary instruments (totalizers, recorders, etc.) properly operated and maintained	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Flow measurement equipment adequate to handle expected ranges of flows	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Actual flow discharged is measured	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f. Flow measuring equipment inspection frequency: <input checked="" type="checkbox"/> Daily <input type="checkbox"/> Monthly <input type="checkbox"/> Weekly <input type="checkbox"/> Other				

Comments:

b.,c-Flow meters not being calibrated at least once a year.

Part 2 - Sampling	YES	NO	N/A	N/E
a. Sampling location(s) are as specified by permit	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Parameters and sampling frequency agree with permit	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Permittee uses required sampling method	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Sample collection procedures are adequate	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
i. Samples refrigerated during compositing	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ii. Proper preservation techniques used	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Conform with 40 CFR 136.3	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Monitoring records (e.g., flow, pH, D.O., etc.) maintained for a minimum of three years including all original strip chart recordings (e.g., continuous monitoring instrumentation, calibration, & maintenance records)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f. Adequate records maintained of sampling date, time, exact location, etc.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Comments:

f.-Records being kept at Portsmouth plant.

Part 3 - Laboratory, General	YES	NO	N/A	N/E
a. Written Standard Operating Procedures (SOPs) for all analysis performed on-site	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. EPA approved analytical testing procedures used (40 CFR 136.3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. If alternate analytical procedures are used, proper approval has been obtained	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. Analysis being performed more frequently than required by permit	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. If (c) is yes, are results reported in permittee's self-monitoring report	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f. Commercial laboratory used: 1. Parameters analyzed by commercial lab: <u>O+G. Metals</u> 2. Lab name: <u>MAS</u>				

Comments:

General Lab Criteria

Facility: Sciotoville WWTP-June 6, 2011

Criteria	Standard Methods Requirement	Acceptable?		Rating
Balance				
• Standard Weights	• Either NIST Class s or ASTM/ANSI Class 1 weights ^{1,2}	<input type="checkbox"/> Yes	<input type="checkbox"/> No	NR
• Calibration Frequency/ Documentation	• Calibration verification required at least once each day the balance is used ³	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
• Cleanliness, air movement, vibration	• Cleanliness of balance is a must and air movement and vibration needs to be kept to a minimum ¹	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
• Other	• Service and recalibrate annually (manufacturer representative or comparable) ¹	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Must be able to measure to 0.1 grams ⁴	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Instrument manual available	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Log book maintained ⁶	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
Comments:				

Criteria	Standard Methods Requirement	Acceptable?		Rating
Drying Oven (Suspended Solids)				
• Temperature Recordkeeping	• Temperature recorded with each use ⁴	<input type="checkbox"/> Yes	<input type="checkbox"/> No	NR
		• Log book maintained ⁶	<input type="checkbox"/> Yes	
• Calibration Frequency/ Documentation	• Thermometer calibrated annually with NIST traceable thermometer ^{1,2} . Correction factor posted on thermometer/equipment ¹	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
• Other	• Thermometer temperature in 0.1°C increments ⁵	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Acceptable temperature range is 103° – 105°F ⁴	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Instrument manual available	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
Comments:				

Criteria	Standard Methods Requirement	Acceptable?		Rating
pH Meter				
• Calibration Frequency/ Documentation	• Calibration verification required for testing over long period of time (e.g. 12 hrs.), or after a large number of samples (every 10 samples) ³	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	U
		• Log book maintained ⁸	<input type="checkbox"/> Yes	
• Minimum of 2 point calibration	• Calibration per manufacturer specification and calibration buffers must bracket anticipated result ⁷	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
• Slope Documentation/ Acceptability	• Slope acceptable range indicated on benchsheet ²	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
• Buffer Expiration Date	• Buffers must not be expired	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
• Other	• Instrument manual available	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Teflon covered magnetic stirrer or equivalent for mixing ⁸	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
Comments:				

General Lab Criteria

Criteria	Standard Methods Requirement	Acceptable?	Rating
Dissolved Oxygen Meter			
• Calibration Method	• Air or known DO calibration method ¹⁰	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	M
	• Calibration per manufacturer specification ¹⁰	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
• Calibration Frequency/ Documentation	• Logbook maintained ⁹	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
	• Calibration verification required at least once each day the meter is used. ³	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
• Other	• Small to no bubble present under membrane (must be smaller than the lead in number 2 pencil) ¹¹	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
	• Instrument manual available	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Comments:			

Criteria	Standard Methods Requirement	Acceptable?	Rating
Incubator (CBOD/E-Coli)			
• Temperature Recordkeeping	• Temperature checked/recorded twice daily for each shelf in use ¹	<input type="checkbox"/> Yes <input type="checkbox"/> No	NR
	• Temperature checked/recorded daily ² (CBOD)	<input type="checkbox"/> Yes <input type="checkbox"/> No	
	• Acceptable temperature range (CBOD) is 20°C ±1.0° ¹²	<input type="checkbox"/> Yes <input type="checkbox"/> No	
	• Acceptable temperature range (E-Coli) is 35°C ±0.5° ²²	<input type="checkbox"/> Yes <input type="checkbox"/> No	
	• Logbook maintained ⁹	<input type="checkbox"/> Yes <input type="checkbox"/> No	
• Temperature Calibration/ Documentation	• Thermometer calibrated annually with NIST traceable thermometer ^{1,2}	<input type="checkbox"/> Yes <input type="checkbox"/> No	
	• Temperature correction information posted on incubator ¹	<input type="checkbox"/> Yes <input type="checkbox"/> No	
• E-Coli can use multiple tubes (five 20 ml or ten 10 mg), or mfg's multi-well tray	• E-coli Ultraviolet lamp (365 nm wave length, 6 W bulb) ²³	<input type="checkbox"/> Yes <input type="checkbox"/> No	
• Other	• Instrument manual available	<input type="checkbox"/> Yes <input type="checkbox"/> No	
	• Temperature Log (thermometer reads to 0.1 Celsius) ⁵	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Comments:			

Criteria	Standard Methods Requirement	Acceptable?	Rating
Refrigerator			
• Temperature Recordkeeping	• Temperature Log (thermometer reads to 0.1 Celsius) ⁵	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	A
• Temperature Calibration/ Documentation	• Thermometer calibrated annually with NIST traceable thermometer ^{1,2}	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
• Other	• Thermometer held in water bath ¹	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
	• Refrigerator temperature ⁵ 6° Celsius ¹³	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
	• Do not store volatile solvents, food, or beverages ¹⁴	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Comments:			

Criteria	Standard Methods Requirement	Acceptable?	Rating
Chlorine Meter			
• Calibration Frequency/ Documentation	• pH/millivolt meter read to 0.1 mV ¹⁵	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	M
	• Calibration verification required for testing over long period of time (e.g. 12 hrs.), or after a large number of samples (every 10 samples) ³	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
• Calibration Method	• Calibration using three iodate solutions 0.2, 1.0, 5.0 milliliters	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	

General Lab Criteria

	or calibration per manufacturer specification ¹⁶			
<ul style="list-style-type: none"> • Slope Documentation/ Acceptability • Other 	<ul style="list-style-type: none"> • Standards used for calibration not expired 	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	<ul style="list-style-type: none"> • Calibration curve (acceptable slope) 	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	<ul style="list-style-type: none"> • Electrode free of deposits and foreign material 	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	<ul style="list-style-type: none"> • Log book being maintained⁹ 	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
<ul style="list-style-type: none"> • Instrument manual available 		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
Comments: Items 4,5,6 are N/A due to type of meter being used.				

Criteria	Standard Methods Requirement	Acceptable?		Rating
Ammonia Meter				
<ul style="list-style-type: none"> • Calibration Frequency/ Documentation 	<ul style="list-style-type: none"> • Calibration verification required for testing over long period of time (e.g. 12 hrs.), or after a large number of samples (every 10 samples)³ 	<input type="checkbox"/> Yes	<input type="checkbox"/> No	NR
		<ul style="list-style-type: none"> • Log book being maintained⁹ 	<input type="checkbox"/> Yes	
<ul style="list-style-type: none"> • Slope Acceptability 	<ul style="list-style-type: none"> • Verify calibration slope is acceptable (per mfg. spec.) 	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
<ul style="list-style-type: none"> • Calibration Method 	<ul style="list-style-type: none"> • Standards used for calibration (3 ammonia solutions of 10 mg/l, 1 mg/l, and 0.1 mg/l) or per mfg. spec.¹⁷ 	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
		<ul style="list-style-type: none"> • Standards used for calibration not expired 	<input type="checkbox"/> Yes	
<ul style="list-style-type: none"> • Other 	<ul style="list-style-type: none"> • Electrode free of deposits and foreign material 	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	<ul style="list-style-type: none"> • Teflon covered magnetic stirrer or equivalent for mixing¹⁸ 	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	<ul style="list-style-type: none"> • Instrument manual available 	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
Comments:				

Criteria	Standard Methods Requirement	Acceptable?		Rating	
Sample Collection/Handling					
<ul style="list-style-type: none"> • Sample Labeling 	<ul style="list-style-type: none"> • Samples container labeled (description, date, time, preservative added, initialed)¹⁹ 	<input type="checkbox"/> Yes	<input type="checkbox"/> No	NR	
<ul style="list-style-type: none"> • Chain of Custody 	<ul style="list-style-type: none"> • Chain of custody (description, date, time, signature)¹⁹ 	<input type="checkbox"/> Yes	<input type="checkbox"/> No		
<ul style="list-style-type: none"> • Other 	<ul style="list-style-type: none"> • Composite samples refrigerated during sample collection¹⁴ 	<input type="checkbox"/> Yes	<input type="checkbox"/> No		
		<ul style="list-style-type: none"> • Equipment blanks utilized¹⁴ 	<input type="checkbox"/> Yes		<input type="checkbox"/> No
		<ul style="list-style-type: none"> • SOP for cleaning of sampling equipment 	<input type="checkbox"/> Yes		<input type="checkbox"/> No
	<ul style="list-style-type: none"> • Log book being maintained⁹ 	<input type="checkbox"/> Yes	<input type="checkbox"/> No		
Comments:					

Criteria	Standard Methods Requirement	Acceptable?		Rating
Desiccator				
<ul style="list-style-type: none"> • General Criteria 	<ul style="list-style-type: none"> • Properly working seals 	<input type="checkbox"/> Yes	<input type="checkbox"/> No	NR
		<ul style="list-style-type: none"> • Desiccant fresh (blue color) 	<input type="checkbox"/> Yes	
<ul style="list-style-type: none"> • Documentation 	<ul style="list-style-type: none"> • Log book being maintained⁹ 	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
Comments:				

General Lab Criteria

Criteria	Standard Methods Requirement	Acceptable?	Rating
Bench Sheets			
<ul style="list-style-type: none"> • General Criteria 	<ul style="list-style-type: none"> • Date(s)² 	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	A
	<ul style="list-style-type: none"> • Analyst initials² 	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
	<ul style="list-style-type: none"> • Blue or black ink pen² 	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
	<ul style="list-style-type: none"> • Calibration information² 	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
	<ul style="list-style-type: none"> • Equations, calculations, units for all measurements, notations, and results present² 	<input type="checkbox"/> Yes <input type="checkbox"/> No	
	<ul style="list-style-type: none"> • Corrections, single line through, initialed and dated² 	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Comments: Item 5 is N/A due to bulk of lab work performed at Portsmouth Plant Lab.			

Criteria	Standard Methods Requirement	Acceptable?	Rating
Hot Water Bath (Fecal Coliform/E. Coli)			
<ul style="list-style-type: none"> • Temperature Recordkeeping 	<ul style="list-style-type: none"> • Temperature Log (thermometer reads 0.2° C)²¹ 	<input type="checkbox"/> Yes <input type="checkbox"/> No	NP
	<ul style="list-style-type: none"> • Incubator temperature 44.5° C ±0.2°^{21/24} 	<input type="checkbox"/> Yes <input type="checkbox"/> No	
<ul style="list-style-type: none"> • Temperature Calibration/ Documentation 	<ul style="list-style-type: none"> • Thermometer calibrated annually with NIST traceable thermometer^{1,2} 	<input type="checkbox"/> Yes <input type="checkbox"/> No	
	<ul style="list-style-type: none"> • Log book being maintained⁹ 	<input type="checkbox"/> Yes <input type="checkbox"/> No	
<ul style="list-style-type: none"> • Water Level 	<ul style="list-style-type: none"> • Thermometer total immersion or partial (line on thermometer to ID immersion depth)^{1,5} 	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Comments:			

Criteria	Standard Methods Requirement	Acceptable?	Rating
Autoclaves/Steam Sterilizers			
<ul style="list-style-type: none"> • All apparatus utilized is adequately sterilized before use 	<ul style="list-style-type: none"> • Sterilizing temperature 121° C²⁵ 	<input type="checkbox"/> Yes <input type="checkbox"/> No	NP
	<ul style="list-style-type: none"> • 10 to 30 minutes time based on material being sterilized²⁶ 	<input type="checkbox"/> Yes <input type="checkbox"/> No	
<ul style="list-style-type: none"> • Documentation 	<ul style="list-style-type: none"> • Verify the autoclave temperature weekly by using a maximum registering thermometer (MRT) to confirm that 121°C has been reached as measured in the exhaust¹ 	<input type="checkbox"/> Yes <input type="checkbox"/> No	
	<ul style="list-style-type: none"> • Date, contents, sterilization time and temperature, total time in autoclave, and analyst's initials should be recorded each time the autoclave is used¹ 	<input type="checkbox"/> Yes <input type="checkbox"/> No	
<ul style="list-style-type: none"> • Temperature Calibration/ Documentation 	<ul style="list-style-type: none"> • Thermometer calibrated annually with NIST traceable thermometer^{1,2} 	<input type="checkbox"/> Yes <input type="checkbox"/> No	
<ul style="list-style-type: none"> • Performance Checks 	<ul style="list-style-type: none"> • Log book being maintained⁹ 	<input type="checkbox"/> Yes <input type="checkbox"/> No	
<ul style="list-style-type: none"> • Performance Checks 	<ul style="list-style-type: none"> • Test monthly for efficacy using a biological such as commercially available <i>Geobacillus stearothermophilus</i> in spore strips, suspensions, or capsules¹ 	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Comments:			

General Lab Criteria

Criteria	Standard Methods Requirement	Acceptable?	Rating
Final Effluent Temperature Monitoring			
<ul style="list-style-type: none"> • General Criteria 	<ul style="list-style-type: none"> • Thermometer calibrated annually with NIST traceable thermometer^{1,2} 	<input type="checkbox"/> Yes <input type="checkbox"/> No	NR
	<ul style="list-style-type: none"> • Thermometer reads in increments of at least 0.1°C⁵ 	<input type="checkbox"/> Yes <input type="checkbox"/> No	
	<ul style="list-style-type: none"> • Log book being maintained² 	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Comments:			

Number of Criteria Rated:	Acceptable	2
	Marginal	2
	Unacceptable	1
	Total Number of Areas Rated	5

Acceptable Ratings – No action required (recommend SOP's written or updated, perform DMRQA's for all onsite analysis, recommend voluntary lab analyst certification, written response not required).	
Marginal Ratings – Improvements required, written response required (recommend SOP's be written or updated, recommend they perform DMRQA's for all onsite analysis, recommend voluntary lab analyst certification, require deficiencies to be addressed in written response).	
Unsatisfactory Rating – Improvements required, written response required, NOV issued (recommend SOP's be written or updated, recommend they perform DMRQA's for all onsite analysis, recommend voluntary lab analyst certification, require deficiencies to be addressed in written response to NOV).	
Consider recommending PAI Audit from DES when:	<ul style="list-style-type: none"> >60% of ratings are Marginal >45% of ratings are a combination of Marginal or Unacceptable >30% of ratings are Unacceptable

General Lab Criteria

Notation of Referenced Method

1	Method 9020-B, Item 4	14	Method 1060A, Item 1
2	Method 1020-A, Item 1	15	Method 4500-CI I, Item 2
3	Method 1020-B, Item 10	16	Method 4500-CI I, Item 4
4	Method 2540-B, Item 2	17	Method 4500-NH3 D, Item 4
5	Method 2550-B, Item 1	18	Method 4500-NH3 D, Item 2
6	Method 1020-B, Item 1	19	Method 1060-B, Item 2
7	Method 4500-H B, Item 4	20	Method 1060-B, Item 1
8	Method 4500-H B, Item 2	21	Method 9222D, Item 1
9	Method 1020-B, Item 2	22	Method 9223 B, Item 2
10	Method 4500-O B, Item 3	23	Method 9223 B, Item 3
11	Method 4500-O G, Item 3	24	Method 1603, Item 2
12	Method 5210-B, Item 5	25	Method 9030-B, Item 3
13	CFR 136.3, Table II	26	Method 9020 B, Table IV

Equipment Logbook Content – All maintenance performed on a piece of equipment should be documented in the logbook. This should include parts replacement and routine maintenance activities. Entries should include date, maintenance performed and initials of person making entry.

Preservation and Holding Times						
Parameter	Container	Min. Sample Size (mL)	Sample Type	Preservation	Maximum Storage Time	
					Recommended	Regulatory
BOD / CBOD	P, G	1000	G, C	Refrigerate $\leq 6^{\circ}\text{C}$	6h	48h
TSS	P, G	200	G, C	Refrigerate $\leq 6^{\circ}\text{C}$	7 d	7 d
pH	P, G	50	G	Analyze immediately	0.25h	0.25 h
NH3-N	P, G	500	G, C	Analyze as soon as possible or add H_2SO_4 to pH <2, Refrigerate $\leq 6^{\circ}\text{C}$	7 d	28 d
TRC	P, G	500	G	Analyze immediately	0.25h	0.25 h
DO (electrode)	G, BOD Bottle	300	G	Analyze immediately	0.25h	0.25 h
Temperature	P, G	--	G	Analyze immediately	0.25h	0.25 h
Metals, general	P, G	1000	G, C	For dissolved filter immediately and add HNO_3 to pH <2	6 months	6 months
Purgeables by purge and trap	G (PTFE lined lid)	40 (X2)	G	HCl to pH <2, Refrigerate $\leq 6^{\circ}\text{C}$	7 d	14 d
Base/Neutrals and acids	G (solvent rinsed or baked)	1000	G, C	Refrigerate $\leq 6^{\circ}\text{C}$	7 d	7 days until extraction 40 days after extraction
Pesticides	G (PTFE lined lid)	1000	C	Refrigerate $\leq 6^{\circ}\text{C}$	7 d	7 days until extraction 40 days after extraction
Fecal Coliform / E-Coli	G, P (Sterilized)	100	G	Refrigerate $\leq 10^{\circ}\text{C}$ If chlorine present, add sodium thiosulfate tablet	6 hrs transport. Start analysis within 2 hrs of receipt in lab.	
Oil and Grease	G	1000	G	HCl or H_2SO_4 to pH <2, Refrigerate $\leq 6^{\circ}\text{C}$	28 d	28 d

General Lab Criteria

Approved Standard Methods	
CBOD / BOD 5 Day	Std Methods 5210-B
Ammonia, Selective Electrode Method	Std Methods 4500-NH3 D
Total Residual Chlorine, DPD Colorimetric Method	Std Methods 4500-Cl G
Total Suspended Solids, Dried at 103-105°C	Std Methods 2540-D
Dissolved Oxygen, Membrane Electrode Method	Std Methods 4500-O G
pH, Electrometric Method	Std Methods 4500-H+ B
Fecal Coliform, Membrane Filter Procedure	Std Methods 9222D
Escherichia Coli, Enzyme Substrate Test	Std Method 9223B
Escherichia Coli Membrane Filtration Procedure	EPA Method 1603
Oil and Grease	USEPA 1664A or Std Methods 5520B
Metals, general	USEPA 200, Std Methods 3111B or C, or 3120B
Volatiles (Purgeables by purge and trap)	USEPA 6210, Std Methods 624
Semi-Volatiles (Base/Neutrals and acids)	USEPA 6410, Std Methods 625
Pesticides	USEPA 6410 and 6630, Std Methods 608